

FACT SHEET

PROPOSED AMENDMENTS TO THE EMISSION STANDARDS FOR RECIPROCATING INTERNAL COMBUSTION ENGINES

ACTION

- On May 22, 2012, the Environmental Protection Agency proposed amendments to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for stationary reciprocating internal combustion engines (RICE).
- In this proposal, EPA is addressing several petitions for reconsideration, legal challenges, and new technical information that had not been brought to the EPA's attention during the rulemaking.
- The proposed amendments would ensure that the standards are achievable, practical, and protective.
- Stationary engines generate electricity and power equipment at industrial, agricultural, oil and gas production, power generation, and other facilities. The EPA estimates there are over 1 million of these engines in the U.S. and this proposal would apply to some of these engines.
- The proposed amendments generally apply to the following:
 - engines used in demand response programs to assure a stable, cost effective source of electricity
 - engines in remote areas of Alaska
 - engines typically used in sparsely populated areas for oil and gas production
 - engines scheduled to be replaced in the next few years due to state or local requirements, and certain engines installed in 2006
 - engine testing requirements for formaldehyde emissions
- EPA is also proposing revisions to the new source performance standards (NSPS) for stationary internal combustion engines (ICE) to ensure consistency with the RICE NESHAP. In particular, a new NSPS standard will apply to emergency engines used for demand response purposes.
- EPA will accept comment on the proposed amendments for 45 days after publication in the Federal Register.

PROPOSED AMENDMENTS

Emergency Demand Response and Peak Shaving

- In an emergency demand response situation, RICE may be used to assure the stability of electrical service. RICE could be called upon to provide power to a facility and/or to the electrical grid to assure available power at peak times also known as peak shaving.
- EPA proposes to allow emergency engines to operate for 100 hours per year without meeting emission limits for the following purposes:
 - monitoring and testing,
 - demand response for Energy Emergency Alert Level 2 situations, and
 - responding to situations when there is at least a five percent or more change in voltage.
- This amendment would allow emergency engines to participate in demand response programs with regional electricity wholesale markets operated by independent system operators and regional transmission operators.
- Demand response programs vary in their requirements and engines may need to be available for 100 hours per year to participate in the programs.
- As part of the 100 hours allowed for monitoring and testing, demand response, and voltage change situations a temporary allowance of 50 hours per year would be provided for any purpose, including peak shaving, and may be used until April 2017. This would apply to units at area sources of hazardous air pollutants.
- If an emergency engine operates for more than 100 hours per year for non-emergency purposes, the engine will need to meet emission limits required for non-emergency engines for the life of the engine.
- The amendments restate that in a true emergency there is no time limit on use of the engines.

Area Source Stationary Spark Ignition Engines Above 500 HP

- These engines are typically natural gas powered engines that are used to power equipment for oil and gas production.
- EPA proposes to replace emission limits for existing area source stationary spark ignition (SI) 4-stroke engines above 500 horsepower (HP) that are located in populated areas with requirements to install catalytic controls, conduct an initial test and annual performance checks of the catalyst, and equip the engine with a high temperature shutdown device or monitor the catalyst inlet temperature continuously.
 - Populated areas are defined as not on Department of Transportation Class 1 pipeline segments or having more than 5 buildings within 0.25 mile radius of the engine.
- EPA proposes to specify that existing area source stationary SI 4-stroke engines above 500 HP that are not located in populated areas are subject to management practices.
 - Unpopulated areas are DOT Class 1 pipeline segment or having 5 or fewer buildings within 0.25 mile radius of the engine.

Remote Areas of Alaska

- EPA proposes to expand the definition of remote areas of Alaska beyond those not on the Federal Aid Highway System.
- This amendment addresses issues unique to Alaska residents who have more energy supply challenges and face harsh weather conditions.

Engines scheduled to be replaced in the next few years due to state or local rules, and certain engines installed in 2006

- EPA proposes to amend the RICE NESHAP to:
 - Allow Tier 1 and Tier 2 certified stationary compression ignition engines that are scheduled to be replaced due to state or local rules to meet management practices until January 1, 2015, or 12 years after installation date, but not later than June 1, 2018.
 - Specify that existing stationary area source Tier 3 certified CI engines installed before June 12, 2006 are in compliance with the NESHAP.

Compliance Alternative for Formaldehyde Emissions

- Based on evidence presented to the Agency by the Engine Manufacturers Association, EPA is proposing to add an option for demonstrating the engines can meet the formaldehyde emission standard including:
 - For existing and new SI 4-stroke rich burn (4SRB) non-emergency engines greater than 500 HP located at major sources and existing SI 4SRB non-emergency engines greater than 500 HP located at area sources engines, showing compliance with the formaldehyde percent reduction standard by demonstrating compliance with a 30 percent reduction of total hydrocarbon emissions.

BENEFITS AND COSTS

- The proposed amendments would reduce the capital and annual costs of the original 2010 rules by \$287 million and \$139 million, respectively. The EPA estimates that with the proposed amendments incorporated the capital cost of the rules is \$840 million and the annual cost is \$490 million.
- The proposed amendments would also decrease the agency's emission reductions estimates from the 2010 standards. The updated estimated reductions in 2013 (including the proposed amendments) are:
 - 2,800 tons per year (tpy) of HAP,
 - 36,000 tpy of carbon monoxide,
 - 2,800 tpy of particulate matter,
 - 9,600 tpy of nitrogen oxides, and
 - 36,000 tpy of volatile organic compounds.
- The EPA estimates the monetized co-benefits of the updated standards (including the

proposed amendments) to be \$830 million to \$2.1 billion. EPA did not monetize the benefits associated with reducing exposure to air toxics or other air pollutants, ecosystem effects, or visibility impairment.

BACKGROUND

- EPA finalized the first regulation for stationary RICE greater than 500 HP located at major sources of HAP in 2004. EPA finalized regulations for new RICE less than or equal to 500 HP located at major sources and new RICE located at area sources in 2008.
- On March 3, 2010, the EPA promulgated NESHAP for existing stationary CI RICE that are:
 - used at area sources of air toxics emissions and constructed or reconstructed before June 12, 2006,
 - used at major sources of air toxics emissions, have a site rating of less than or equal to 500 HP, and constructed or reconstructed before June 12, 2006,
 - used at major sources of air toxics for non-emergency purposes, have a site rating of greater than 500 HP, and constructed or reconstructed before December 19, 2002.
- On August 20, 2010, the EPA promulgated NESHAP for existing stationary SI RICE that are:
 - used at area sources of air toxics emissions and constructed or reconstructed before June 12, 2006,
 - used at major sources of air toxics emissions, have a site rating of less than or equal to 500 HP, and constructed or reconstructed before June 12, 2006.
- After the publication of the final rules in 2010, various stakeholders raised a number of issues through lawsuits, several petitions for reconsideration of the final rule, and other communications. The stakeholders requested that EPA reconsider allowances for operation of emergency engines, the control and monitoring requirements associated with existing SI engines at area sources, the requirements affecting engines in remote areas of Alaska, and provisions related to agricultural engines. The EPA granted the petitions, and, to address the issues, is proposing these amendments.
- The schedule for completing this rule is part of a settlement agreement with EnerNOC, which requires the EPA Administrator to issue a final rule by December 14, 2012.

HOW TO COMMENT

- The EPA will accept comment on the proposal for 45 days after publication in the Federal Register. Comments, identified by Docket ID Number EPA-HQ-OAR-2008-0708, may be submitted by one of the following methods:
 - www.regulations.gov: follow the on-line instructions for submitting comments.

- E-mail: Comments may be sent by electronic mail (e-mail) to a-and-r-Docket@epa.gov.
- Fax: Fax your comments to: (202) 566-9744.
- Mail: Send your comments to:

Air and Radiation Docket and Information Center,
Environmental Protection Agency, Mail Code: 2822T
1200 Pennsylvania Ave., NW
Washington, DC 20460

- Hand Delivery or Courier: Deliver your comments to:

EPA Docket Center
1301 Constitution Ave., NW
Room 3334
Washington, DC 20004

Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

FOR MORE INFORMATION

- The proposed rule is posted at: <http://www.epa.gov/ttn/oarpg/new.html>.
- For more information on how to comply with the rule, please see: <http://www.epa.gov/ttn/atw/rice/ricepg.html>.
- Today's proposed rule and other background information are also available either electronically at <http://www.regulations.gov>, EPA's electronic public docket and comment system, or in hardcopy at the EPA Docket Center's Public Reading Room.
 - The Public Reading Room is located in the EPA Headquarters Library, Room Number 3334 in the EPA West Building, located at 1301 Constitution Ave., NW, Washington, DC. Hours of operation are 8:30 a.m. to 4:30 p.m. eastern standard time, Monday through Friday, excluding Federal holidays.
 - Visitors are required to show photographic identification, pass through a metal detector, and sign the EPA visitor log. All visitor materials will be processed through an X-ray machine as well. Visitors will be provided a badge that must be visible at all times.
 - Materials for this proposed action can be accessed using Docket ID No. EPA-HQ-OAR-2008-0708.
- For further information about the proposed action, contact Ms. Melanie King of EPA's Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Energy Strategies Group at (919) 541-2469 or by e-mail at king.melanie@epa.gov.

